

AMENDMENTS TO THE CLAIMS

The following listing of claims will replace all prior versions and listings of claims in the application.

LISTING OF CLAIMS

1. (currently amended) An ink for ink-jet recording containing ~~an insoluble dye~~ oil-soluble dye, a humectant, a penetrant, water, and an amphiphilic star block polymer comprising a core and arms, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m,

wherein each of said arms has a hydrophobic segment and a hydrophilic segment, the hydrophilic segment is located at the end of the arm farthest from the core, and the hydrophilic segment is obtained by hydrolyzing vinyl ether with ester side chains.

2. (original) The ink of Claim 1, wherein the viscosity at 25°C is in a range of 1 to 10 mPa • s.

3. (currently amended) An ink cartridge including ink for ink-jet recording, the ink containing ~~an insoluble dye~~ oil-soluble dye, a humectant, a penetrant, water, and an amphiphilic star block polymer comprising a core and arms, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m,

wherein each of said arms has a hydrophobic segment and a hydrophilic segment, the hydrophilic segment is located at the end of the arm farthest from the core, and the hydrophilic segment is obtained by hydrolyzing vinyl ether with ester side chains.

4. (currently amended) A recording apparatus including ink for ink-jet recording, the ink containing ~~an insoluble dye~~ oil-soluble dye, a humectant, a penetrant, water, and an amphiphilic star block polymer comprising a core and arms, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m,

wherein each of said arms has a hydrophobic segment and a hydrophilic segment, the hydrophilic segment is located at the end of the arm farthest from the core, the hydrophilic segment is obtained by hydrolyzing vinyl ether with ester side chains, and

recording is performed by jetting the ink onto a recording medium.

5. (currently amended) An ink for ink-jet recording containing ~~an insoluble dye~~ oil-soluble dye, a humectant, a penetrant, water, and an amphiphilic heteroarm star polymer, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m,

wherein the amphiphilic heteroarm star polymer has a hydrophobic segment and a hydrophilic segment,

the hydrophilic segment is obtained by hydrolyzing vinyl ether with ester side chains, and

the star polymer ~~dispersed~~ dissolves the ~~insoluble dye~~ oil-soluble dye in an ink composition.

6. (original) The ink of Claim 5, wherein the viscosity at 25°C is in a range of 1 to 10 mPa • s.

7. (currently amended) An ink cartridge including ink for ink-jet recording, the ink containing ~~an insoluble dye~~ oil-soluble dye, a humectant, a penetrant, water, and an amphiphilic heteroarm star polymer, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m,

wherein the amphiphilic heteroarm star polymer has a hydrophobic segment and a hydrophilic segment,

the hydrophilic segment is obtained by hydrolyzing vinyl ether with ester side chains, and the star polymer ~~dispersed~~ dissolves the ~~insoluble dye~~ oil-soluble dye in an ink composition.

8. (currently amended) A recording apparatus including ink for ink-jet recording, the ink containing ~~an insoluble dye~~ oil-soluble dye, a humectant, a penetrant, water, and an amphiphilic heteroarm star polymer, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m,

wherein recording is performed by jetting the ink onto a recording medium,

the amphiphilic heteroarm star polymer has a hydrophobic segment and a hydrophilic segment,

the hydrophilic segment is obtained by hydrolyzing vinyl ether with ester side chains, and

the star polymer ~~disperses~~ dissolves the ~~insoluble dye~~ oil-soluble dye in an ink composition.

9. (currently amended) An ink for ink-jet recording containing ~~an insoluble dye~~ oil-soluble dye, water, a surface-active material, and an additive composed of a hydrophobic segment that attaches to said ~~insoluble dye~~ oil-soluble dye and a hydrophilic segment located outside of said hydrophobic segment, the surface tension of the ink at 25°C being in a range of 20 to 50 mN/m,

~~Wherein~~ wherein the hydrophilic segment is obtained by hydrolyzing vinyl ether with ester side chains.